2003 ACCESSORIES/SAFETY EQUIPMENT

Mercedes-Benz - Air Bag Restraint Systems

DESCRIPTION & OPERATION

WARNING: **Accidental air bag deployment is possible. Personal injury may result. Read and follow all WARNINGS and AIR BAG SAFETY PRECAUTIONS before working on air bag system or related components.**

All models are equipped with Supplemental Restraint System (SRS). The main components of SRS are driver-side air bag module, passenger-side air bag module, side impact air bag modules (located in doors), SRS control module, side air bag sensors, SRS warning light, driver-side knee bolster, passenger-side knee bolster and seat belt pretensioners or Emergency Tensioning Retractor (ETR) seat belt assembly. Additionally, some vehicles may be equipped with head impact (curtain type) air bags.

Both SRS and ETR are electronically activated by a single control module. There are 2 thresholds which must be exceeded to trigger an ETR action, air bag deployment, or both. If a moderately severe frontal collision occurs exceeding first triggering threshold where protection from seat belt is sufficient, only Emergency Tensioning Retractor (ETR) is activated if seat belt is buckled. If a moderately severe frontal collision occurs exceeding first triggering threshold where protection from seat belt is sufficient, but seat belt is not buckled, air bag is deployed and ETR is not activated.

If a severe frontal collision occurs exceeding second triggering threshold where protection from seat belt is insufficient, air bag is deployed. ETR is activated if seat belt is buckled. If seat belt is not buckled, ETR is not activated when second triggering threshold is reached. Passenger air bag will deploy even if passenger seat is not occupied when a triggering threshold is exceeded. During certain types of collisions, the air bags will be deploy, but ETRs will not be activated.

The side air bag on the driver-side deploys whenever the driver-side air bag module is deployed and when there is a substantial side impact crash. The air bag on the passenger-side will activate only when a sensor (Occupied Seat Recognition Sensor) in the passenger seat sends a signal to the SRS control module that the passenger-side seat is occupied. Side air bags mounted in rear doors will deploy when side impacts occur that exceed preset parameters.

Head impact air bag modules will deploy when certain side impacts occur that exceed preset parameters. Head impact air bag will deploy independently of other air bags on side of impact.

COMPONENT LOCATIONS

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Component	Location
AIR BAG warning light	Instrument Panel Cluster
Clockspring	Under steering wheel
Driver-side air bag module	On steering wheel
Emergency Tensioning Retractor (ETR)	Driver-side & passenger-side lower B- & C-pillars[(1)]

Front Passenger Seat Occupied Recognition With Automatic Child Seat Recognition (ACSR) sensor	Under passenger front seat cushion
Head impact air bag modules	Driver-side & passenger-side roof rails over front & rear doors
Knee bolsters	Driver-side and passenger-side lower instrument panel
Passenger-side air bag module	Passenger-side instrument panel
Side impact air bag modules	In front & rear doors
Side impact sensors	On floor inboard of door openings
(1) On C Class, rear seat ETRs are part of seat belt buckle assemblies.	

SERVICING

SRS AIR BAG label on driver-side door latch post indicates SRS replacement date for air bag units. All SRS components must be thoroughly inspected, including wiring harness. Before component replacement, check for SRS fault codes by performing system operation check. See **SYSTEM OPERATION CHECK** . SRS service life is 10 years from manufactured date or 10 years from SRS replacement date after accident related repairs are completed.

SYSTEM OPERATION CHECK

SRS warning light indicates SRS and Emergency Tensioning Retractor (ETR) system readiness. Turn ignition on. SRS warning light will illuminate, then turn off after approximately 4-6 seconds indicating SRS system is functioning properly. If SRS warning light does not illuminate, illuminates while driving or is continuously illuminated, there is a system fault. Repair malfunctioning system.

AIR BAG SAFETY PRECAUTIONS

Observe these precautions when servicing the air bag system:

- When working around SRS components and before any repairs are performed, disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** .
- Before straightening any damage to body, or before performing electrical arc-welding, disable air bag system. See **DISABLING & ACTIVATING AIR BAG SYSTEM** .
- Always wear safety glasses and gloves when handling a deployed air bag module. Air bag module may contain sodium hydroxide deposits which are irritating to the skin.
- Always use control module and impact sensors made by same manufacturer. Using components produced by different manufacturers could cause accidental air bag or ETR deployment.
- DO NOT repair any portion of SRS wiring harness.
- If any SRS component is dropped from a height greater than 1.6 feet (0.5 m), it must be replaced.
- If SRS components show signs of damage, they must be replaced.
- Always handle air bag module with trim cover facing away from your body.
- Always place air bag module on workbench with trim cover up, away from loose objects.

- DO NOT expose any SRS component to temperatures in excess of 212°F (100°C).
- DO NOT expose any SRS component to grease, oil or cleaning agents.

DISABLING & ACTIVATING AIR BAG SYSTEM

DISABLING SYSTEM

Turn ignition off and remove key. Disconnect negative battery cable and shield cable end. Disconnect SRS control module electrical connector.

ACTIVATING SYSTEM

Connect SRS control module electrical connector. Ensure no one is in vehicle. Turn ignition on. Connect negative battery cable. Go to **SYSTEM OPERATION CHECK** .

DISPOSAL PROCEDURES

Several situations may arise requiring some form of disposal action, including:

- Scrapping a vehicle containing deployed air bag modules and ETRs.
- Scrapping a vehicle with live air bag modules and ETRs.
- Disposal of a live but electrically faulty air bag module and/or ETR.
- Disposal of a deployed air bag module and/or ETR.

DEPLOYED AIR BAG OR ETR

Deployed air bag modules and ETRs can be disposed of like any other part.

SCRAPPED VEHICLE

Undeployed air bag modules and ETRs CANNOT be disposed of without first being deployed. Contact manufacturer for additional information.

UNDEPLOYED AIR BAG OR ETR

Undeployed air bag modules and Emergency Tensioning Retractor (ETR) seat belts CANNOT be disposed of without first being deployed. Contact manufacturer for additional information.

POST-COLLISION INSPECTION

When a vehicle has been involved in a collision, certain components of the passive restraint system must be inspected or replaced. See **AIR BAG/SRS COMPONENT INSPECTION & REPLACEMENT TABLES** article in the GENERAL INFORMATION section.

REMOVAL & INSTALLATION

WARNING: **Accidental air bag deployment is possible. Personal injury may result. Read and follow all WARNINGS and AIR BAG SAFETY PRECAUTIONS before working on air bag system or related components.**

Removal and installation information is not available.

DIAGNOSTICS

Air bag system diagnostic information is not available. All air bag system diagnosis must be carried out using manufacturers proprietary test equipment.

WIRE REPAIR

If any part of SRS wiring harness is damaged, DO NOT repair wiring harness, replace complete wiring harness.

WIRING DIAGRAMS

Wiring diagrams are not available.